

## WHAT IS CLAIMED IS:

1. A device for detecting a passing object as the passing object traverses a light path between a light source and a light reflecting means that reflects light emitted from the light source, the device comprising:

said light source;

said light reflecting means; and

a light receiving sensor that receives light reflected by the light reflecting means,

wherein said light reflecting means has a function of retroreflecting incident light.

2. The device for detecting a passing object according to claim 1, wherein said light receiving sensor and said light source are disposed on a side opposite to the light reflecting means with respect to a passing path of the passing object.

3. The device for detecting a passing object according to claim 2, further comprising an optical member that transmits a portion of light and reflects a portion of light, said optical member being disposed on a light path between said light source and said light reflecting means,

wherein said light receiving sensor is disposed to receive light that is reflected or transmitted by said optical member after being reflected by said light reflecting means.

4. The device for detecting a passing object according to claim 1, wherein the light source is a laser light source.

5. A device for measuring a velocity of a passed object by using a time difference detected by two devices for detecting a passing object as the passing object traverses a light path between a light source and a light reflecting means that reflects light emitted from the light source, said two devices being disposed along a passing path of the passing object, each of said devices comprising:

said light source;

said light reflecting means;

a light receiving sensor that receives light reflected by said light reflecting means; and

an optical member that transmits a portion of light and reflects a portion of light,

wherein, in each of said devices for detecting the

passing object:

said light source and said light receiving sensor are disposed on a side opposite to the light reflecting means with respect to the passing path of the passing object;

a light path of light reflected by said light reflecting means and a light path of light incident on said light reflecting means are aligned each other;

said optical member is disposed on the light path between said light source and said light reflecting means; and

said light receiving sensor is disposed in a location so that said light receiving sensor receives light that is reflected by said light reflecting means and that is reflected or transmitted by said optical member.

6. The device for measuring a velocity of a passed object according to claim 5, wherein said light reflecting means has a function of retroreflecting incident light.

7. The device for measuring a velocity of a passed object according to claim 5, wherein said light source comprises a laser light source.

8. The device for measuring a velocity of a passed

object according to claim 5, wherein the passed object is a golf club head of a golf club that moves by being swung.